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An Essay
on
Haemoptysis
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of
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Anno Domini 1829

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The term Haemoptysis, from its derivation aima blood and ptuo to spit, would seem to imply any kind of hae-morhage that was accompanied with the act of spit-ing; and, in fact, this is the true and proper meaning of the word according to its origin, but in its most usual acceptation, it means only to imply that bleeding of the lungs or their immediate appendages which is known to be always ac-companied with this unavoidable circumstance, and from this underiating and necessary attendant or characteristic of haemor-rhage of the lungs, it is refered to these organs and these alone. The reason no doubt why it is used to signify this kind of hae-morhage alone, is because it usually and most frequently pro-ceeds from these parts when blood is thrown out by spitting, and also because there is no danger to be apprehended when it flows from the internal surface of the mouth and fauces. It may also be owing to the seldom application that is ever made by the affected person, as there is no bad feeling or other con-comitant symptom attending in these cases. From these circumstances then, it may be easily perceived or accounted

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for, why it is this term is always and so invariably applied to this kind of haemorrhage. In fact there is no necessity or it is a matter of no practical importance, as to a further ex-tension of the term, for when there is a discharge of blood from the mouth itself, or from the fauces, its symptoms or effects are so slight and mild as hardly ever to give pain to the affected person or to require any medical as-sistance.

The discharge of blood in haemorrhage of the lungs is generally preceded or accompanied with a sense of weight, fullness, and anxiety about the chest, a greater or less de-gree of pain in some part of the thorax and also some uneasiness in breathing, being increased especially on taking a full inspiration and sometimes a sense of heat is felt under the sternum and also a saltish taste is experienced by the patient before the disease makes its appearance. Sometimes it is preceded by more or less irritation or a tickling sensation in the larynx; in order to relieve which a hawking or cough is made which brings

up blood of a florid color and frothy appearance show-
-ing itself in streaks entangled with the saliva.
In a short time afterwards, the irritation returns &
more blood of the same description is brought up and
frequently accompanied with a rattling noise in the
trachea. This is most commonly the manner in which
Haemoptysis shows itself, but occasionally at the very on
-set, the disease is accompanied with a cough and the
blood is discharged by hawking. The blood which is thrown
off from the lungs in the first instance, is for the
most part in very small quantities and then ceases to flow
entirely - In other cases its discharge is much greater
more particularly when it frequently occurs and often
it thus continues to show itself at intervals for some
time but however is rarely ever so profuse as to endanger
life by its excess or suddenly impeding respiration. It
will perhaps be proper to remark before I proceed to
the further consideration of the subject that the
blood which is spit up is not always of a florid color

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but sometimes of a thick dark or blackish hue. The inference however to be drawn is nothing more or less than that the blood has remained stagnant for a longer or shorter time in the chest before it was discharged. As this disease is liable to be mistaken for other affections particularly on account of the fewness of symptoms which may supervene it will be important and highly necessary to point out the marks of difference, that the true nature of the complaint may be ascertained. The affections or other kinds of haemorrhage with which this disease can or is in any way liable to be confounded are bleeding from some part of the internal surface of the mouth, from the fauces, and from the stomach. It may however be generally distinguished by attending to the following marks; If blood be spit out and proceed from the mouth itself, it is always discharged without any coughing or hawking and very frequently by viewing its internal surface, one will be enabled to perceive the spot from whence it flows. If it proceed from the fauces or adjoining cavities of the nose it may and probably will be accompanied with a hawk-

ing and sometimes coughing, but every one will be aware of its origin when he takes into consideration that haemorrhage from the lungs is of more frequent occurrence than that of the fauces, and moreover, that the latter hardly ever happens to any but those persons who have been before subject to bleeding of the nose. The blood proceeding from the fauces has been said never to be of so florid or red a color, as that proceeding directly and immediately from the lungs. Sometimes by inspection into the fauces it can be evidently traced to the cause of erosion. In general the manner in which the blood is discharged from the lungs or the symptoms which may more or less accompany this haemorrhage, will point out the place of its origin, but besides these there are other circumstances which may occur that will lead to a discovery of it, as the period of life and perhaps some other marks of predisposition.

From what has now been delivered as to the distinguishing signs, the disease may be easily known from a

bleeding of the mouth or fauces. It now remains to point out the manner by which it is to be distinguished from Haematemesis or vomiting of blood, as it is likely to be confounded with this also. It will however be easy to understand the marks of difference when we reflect that the blood which issues from the lungs appears for the most part in much smaller quantities than when it proceeds from the stomach — that when it comes from the stomach it is always of a dark or blackish color, more grumous, and frequently mingled with its contents. On the other hand when it originates from the lungs, it is always or at least generally of a florid or red color and is entangled with a small quantity of mucus or saliva. The reason no doubt why we are liable to confound the two diseases, is, because coughing and vomiting sometimes occur nearly simultaneously, but according as the one or the other first arises, we may be enabled to ascertain the source from whence it proceeds, whether from the lungs or the stomach. The causes which are capable of inducing this disease are numerous and should be considered under the heads of occasional and predisponent. Among the occasional,

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may be enumerated any of the following, as jumping, running, violent attempts in lifting heavy weights, powerful exertions of the voice, a constant practice of blowing on wind instruments, drinking to excess, exposure to the sudden vicissitudes of weather, the amputation of a limb, and the suppression of some natural or accustomed discharge, as the menstrual or haemorrhoidal flux.

Haemoptysis may likewise occur with pneumonia, coughs and hectic fever, but on these occasions, is to be considered as a critical discharge

We may rank among the occasional causes whatever brings on a preternatural degree of excitement in the system and thereby hastens the circulation of the blood through the lungs.

By predisposing causes, we mean nothing more or less than that natural diathesis which sometimes prevails in the system and which readily manifests itself on the patients exposing himself to the occasional or exciting causes. By attending particularly to this diathesis, (if any such exist) our treatment becomes the more

rational and we are better able to form a correct opin-ion of the probable termination of the disease.
What are the predisposing causes? 1st Plethora or general fullness of the blood vessels which is the least frequent cause and is more under our controul, than any other for here there exists no original or permanent derange-ment in the organization of the parts. 2nd The period of life. Haemoptysis is said to prevail chiefly between the age of fifteen and twenty five; seldom happens to persons under twelve years and is by no means common af-ter thirty five. Its occurrence at this season of exis-tence has been imputed to the growth of the thorax, after other parts of the body have acquired their full extent and resistance, which is "manifested by the in-creased width which the chest acquires at that pe-riod of life". 3d Scrofula or that habit of body which a-mong other peculiarities is denoted by a general del-icacy of structure throughout the whole body; as a thin soft and smooth skin, light coloured or bluish hair, and a lax muscular fibre. "Of this delicacy

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of structure the blood vessels appear to partake and conse-quently a disposition to haemorrhage becomes also a character of scrofula." The fourth and last predispo-sing cause is malformation of the chest, which appears to act in establishing this disease by preventing the neces-sary expansion of the lungs. The body in this instance is marked by a narrow thorax and prominent shoulders. Persons of this description of body have been most com-monly affected in their earlier life with the rickets, which causes the ribs or spine to be more or less contorted or its curvature to be somewhat unnatural, and thereby creates the disease under consideration. From what has already been said of the occasional and predis-ponent causes, it will be no difficult matter to per-ceive how they act in bringing about the same effect, one set accidentally and the other naturally exciting immediate action in the lungs. They all appear evidently to operate by inducing plethora in, or inviting a greater determination of blood to the lungs. This increased flow of blood acting with

greater force than usual against the internal sur-
-face of the vessels, causes them sometimes to rupture, in
order to relieve themselves of this unnatural accumulation.
This is the manner in which Haemoptysis is said occasion-
-ally to occur, but it is seldom if ever the case and is by
no means to be considered a common occurrence. The most
usual manner however in which it takes place, is by the
increased impetus of blood through the lungs creating more
or less irritation or inflammation in the vessels. This
excites in the exhalents a morbid or an increased de-
gree of action which causes the blood to flow along with
the serum into the bronchial cavities. The excitability
therefore of the blood vessels causes their mouths or excretory
orifices to become so preternaturally enlarged, that the
blood may flow through them unchanged. This appears
to be the most rational theory that can be given of pul-
-monary haemorhage, especially when we come to survey
the structure of the lungs, the delicacy of its texture,
the numerous ramifications of blood vessels, and the
suddenness with which they commence to branch from

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larger vessels. Indeed it appears a matter of surprise that it does not occur oftener than it really does. From the organization of the lungs, then, that indicates their liability to plethora and their incapacity to resistance without some injury of structure, we at once perceive why the occasional and predisponent causes should bring on such a phenomenon. The only manner then by which this organ can relieve itself is, as has been mentioned, by the rupture of some of its vessels or the blood preternaturally exciting the exhalents causes their patulous orifices to be so enlarged, that it passes out in its pure and unaltered state. The objection made to the plethoric doctrine laid down above, is, that plethora does not exist in every instance, but on the contrary we frequently meet with Haemoptysis in persons of a lax delicate habit of body and languid circulation, & therefore this doctrine will not hold. It may be answered by way of refutation, that the strength and resistance of the blood vessels is in proportion to the delicacy and laxity of other parts. Moreover what

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would be considered a full state of the vessels in one person would not be in another. Having exposed the fallacy of such an objection, it will now be sufficiently easy to comprehend the nature of this complaint and the principles on which its treatment is founded. If the pulse be full, quick, and hard, as is frequently the case previous to an effusion in active haemorrhage, bleeding should be resorted to, and to have its full effect, a large quantity should be drawn at one time. This remedy has sometimes been supplanted by the use of digitalis but the lancet should always have the preference when the above mentioned condition of the system prevails, for that increase of action in the blood vessels which causes their rupture or an effusion of blood is only to be removed by this process. After bleeding has been premised to a considerable extent, the pulse sometimes becomes soft and many indications of the inflammatory diathesis disappear yet the haemorrhage is repeated. In cases of this kind digitalis seems very applicable and acts by diminishing the force and velocity of the circulation.

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Its effect should be kept up sufficiently long to allow the vessels to acquire their tone and capacity to resistance. In consequence however of the digitalis being very precarious in its operation, it should give place to other remedies. It sometimes does not act promptly when given in small doses, and when increased endangers vomiting. In habitual cases of Haemoptysis accompanied with slight cough and great irritability of constitution, it is well calculated to render service. The superacetate of lead is a less precarious remedy and more prompt in its operation, but nevertheless should be subject to the same restriction, as digitalis viz never to be given until febrile or arterial action is reduced.
Opium has almost been indiscriminately employed in the various kinds of haemorrhage, but in Haemoptysis great attention has been paid to the state of the system previous to its administration. It appears to be better suited to the passive forms of haemorrhage or that flow of the blood connected with an enfeebled circulation. Hyoscyamus has occasionally been prescribed

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in those cases where the administration of opium was indica-
-ted, but should never supersede the employment of this arti-
-cle. Blisters have been applied in this disease and no doubt
with the happiest effect, in those cases where there exists a
weak action in the circulation and especially if there re-
-main a dull or heavy pain in the chest. Emetics have
been prescribed and when given under the limitations,
their utility is unquestionable, but of late they have
been administered in almost every form of haemorrhage
without any regard to the state of the system.
Nitre when combined with Tartar Emetic frequently
proves serviceable in the active form of Haemptysis.
Muriate of soda has been given, but is only suited to
those cases where there is a very slight discharge of
blood. Tonics have received no small share of praise
but are only adapted to chronic cases or a debilitated
state of the system. The mineral acids and chalyb-
-eates are the most appropriate of this class of remedies.
The foregoing treatment will avail nothing, unless
strict injunctions be given to the patient acco-

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ding, as the exigencies of the case may demand. In a general way, all exertions of body, excitement of the mind, together with other occasional causes should be avoided. He should be confined to bed with his head and shoulders elevated and should be prohibited even from talking if the haemorrhage be any way profuse. His chamber should be well ventilated, his diet should be low, his drinks cool and acidulated. Finally if the disease be connected with scrofula, or a strong disposition to phthisis pulmonaris exists, a strict prophylactic plan should be adopted.